Björling Problem and Weierstrass-Enneper Representation of Maximal Surface in Lorentz-Minkowski Space

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Minimal surface has zero mean curvature at every point in Euclidean space. Many studies have been carried out to obtain minimal surfaces. Björling problem is one of them and we can get minimal surface on a given curve with the help of complex variables. Also one can express a minimal surface with holomorphic forms with the help of Weierstrass- Enneper representation. In this talk we consider the Björling problem and Weierstrass- Enneper representation in Lorentz-Minkowski space for maximal surface which is a spacelike surface with zero mean curvature in L^3. Then we get new examples of maximal surfaces which based on circle and helix. Then we obtain 1-holomorphic forms of these surfaces. Also we deal with the relation between minimal and maximal surfaces in terms of Weierstrass-Enneper representation. Especially we investigate duality of rotational and helicoidal surfaces.